

What is claimed is:

1. Xylitol-producing *Candida tropicalis* CJ-FID (KCTC 10457BP).
- 5 2. An alginate bead prepared by adding the *Candida tropicalis* to an aqueous alginic acid solution with stirring to obtain a uniform solution and dripping the uniform solution to a calcium salt.
3. A method for producing xylitol, comprising:
10 preparing a xylitol-producing fermentation medium containing xylose and sucrose;
 inoculating the alginate bead of claim 2 onto the fermentation medium; and
 fermenting the fermentation medium in a fermenter.
- 15 4. The method of claim 3, further comprising:
 purifying with an activated charcoal column of a xylitol-containing fermentation culture produced by the fermentation;
 purifying with an anion column of a xylitol solution
20 produced by the purification with the activated charcoal column;
 and
 preparing a xylitol powder from a xylitol solution produced by the purification with the anion column.